[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0273; Project Identifier AD-2021-00050-E; Amendment 39-21765; AD 2021-21-05]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all General Electric Company (GE) GEnx-1B64, GEnx-1B64/P1, GEnx-1B64/P2, GEnx-1B67, GEnx-1B67/P1, GEnx-1B67/P2, GEnx-1B70, GEnx-1B70/75/P1, GEnx-1B70/75/P2, GEnx-1B70/P1, GEnx-1B70/P2, GEnx-1B70C/P1, GEnx-1B70C/P2, GEnx-1B74/75/P1, GEnx-1B74/75/P2, GEnx-1B76/P2, GEnx-1B76A/P2, GEnx-2B67, GEnx-2B67/P, and GEnx-2B67B model turbofan engines. This AD was prompted by an in-service occurrence of loss of engine thrust control resulting in uncommanded high thrust. This AD requires revising the operator's existing FAA-approved minimum equipment list (MEL) by incorporating into the MEL the dispatch restrictions listed in this AD. This AD also requires initial and repetitive replacement of the electronic engine control (EEC) MN4 microprocessor. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ae.ge.com; website: www.ge.com. You may view this

service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759. It is also available at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0273.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0273; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mehdi Lamnyi, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7743; fax: (781) 238-7199; email: Mehdi.Lamnyi@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all GE GEnx-1B64, GEnx-1B64/P1, GEnx-1B64/P2, GEnx-1B67, GEnx-1B67/P1, GEnx-1B67/P2, GEnx-1B70, GEnx-1B70/75/P1, GEnx-1B70/75/P2, GEnx-1B70/P1, GEnx-1B70/P2, GEnx-1B70C/P1, GEnx-1B70C/P2, GEnx-1B74/75/P1, GEnx-1B74/75/P2, GEnx-1B76/P2, GEnx-1B76A/P2, GEnx-2B67, GEnx-2B67/P, and GEnx-2B67B model turbofan engines. The NPRM published in the *Federal Register* on April 16, 2021 (86 FR 20094). The NPRM was prompted by a report from the manufacturer of an in-service loss of engine thrust control on a GE90-115B model turbofan engine on October 27, 2019, that resulted in uncommanded high thrust. Analysis by the manufacturer found accumulated thermal cycles of the MN4 integrated circuit in the EEC, through normal operation, causes the solder ball joints to wear out and eventually fail over time. Since the GE90 and the GEnx model turbofan engines share the same EEC hardware and experience similar thermal and vibratory environments, the

manufacturer determined that GEnx model turbofan engines are susceptible to the same type of failure. In the NPRM, the FAA proposed to require revising the existing operator's FAA-approved MEL by incorporating into the MEL the dispatch restrictions listed in paragraph (g) of this AD. In the NPRM, the FAA also proposed to require initial and repetitive replacement of the EEC MN4 microprocessor using an approved overhaul procedure. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from nine commenters. The commenters were Air Line Pilots Association, International (ALPA), Japan Airlines, American Airlines (American), Cathay Pacific Airways (Cathay Pacific), Jetstar Airways (Jetstar), GE, The Boeing Company (Boeing), United Airlines Engineering (UAL Engineering), and United Parcel Service (UPS). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Require a Revision to the Master Minimum Equipment List

ALPA and Japan Airlines suggested that the FAA modify paragraph (g) of the NPRM to require a revision to the master minimum equipment list (MMEL), similar to that required for the operator's FAA-approved MEL. ALPA stated that while revising each operator's FAA-approved MEL would be required, the NPRM does not mention revision of the MMEL through either the Flight Operations Evaluation Board or the Aircraft Evaluation Group process. Japan Airlines reasoned that when the dispatch restriction is necessary, it should be specified in the MMEL, not only in the operator's FAA-approved MEL.

The FAA disagrees. The FAA does not plan to require the requested change to the MMEL because the required change to the MEL is an interim action. The design approval holder is working on a terminating action to correct the unsafe condition. The FAA did not change this AD as a result of this comment.

Request to Clarify the Compliance for Central Maintenance Computing Function

Japan Airlines requested that the FAA clarify which function within the Central Maintenance Computing Function (CMCF) operators should use to check for the engine

indicating and crew alerting system (EICAS) and maintenance message. Japan Airlines stated that Figure 1 to paragraph (g)(1) of the NPRM does not clearly specify whether the CMCF Existing Fault function is the only function that needs to be checked or if other CMCF functions also need to be checked.

The FAA disagrees with the need to clarify Figure 1 to paragraph (g)(1) of this AD to indicate which function within the CMCF operators should use to check for EICAS and maintenance messages. The FAA notes that operators should follow the procedures in their approved fault isolation manuals when checking for faults. The FAA did not change this AD as a result of this comment.

Request to Change Compliance to Include Main Channel Board

American suggested that the FAA change paragraph (g)(3) of the NPRM from "replace the EEC MN4 microprocessor" to "replace the EEC MN4 microprocessor or main channel board (MCB)." American reasoned that they have had to replace the MCB during EEC MN4 microprocessor repairs due to unrelated findings. American also stated that this change would allow such instances to take credit for satisfying the AD, which seems to align with the intention of the NPRM based on the proposed requirements specified in paragraph (i) of the NPRM.

The FAA acknowledges that the EEC MN4 microprocessor can be replaced with a new one as a piece part, part of the MCB, or part of the EEC for compliance with paragraph (g)(3) of this AD. The FAA does not find it necessary to change this AD to reference replacement of the MCB.

Request to Clarify Soft Time Cycles of Revised Service Information

American commented that R02 of GE GEnx-1B Service Bulletin (SB) 73-0097, dated May 17, 2021 (GEnx-1B SB 73-0097), and GE GEnx-2B SB 73-0090, dated May 20, 2021 (GEnx-2B SB 73-0090) include a new "soft time" requirement of 9,500 cycles that should be attained before the EEC MN4 microprocessor be replaced. American requested that if the FAA incorporated R02 of these SBs in its AD, the FAA should explicitly state that replacement of EEC MN4 microprocessor after the soft time of 9,500 cycles is not part of the AD requirements. American commented that this would allow for

instances where the EEC MN4 microprocessor or MCB was replaced prior to the soft time.

This AD requires replacing the EEC MN4 microprocessor at intervals not to exceed 11,000 cycles since new (CSN) or cycles since last replacement. The recommended soft time of 9,500 CSN prior to replacing the EEC MN4 microprocessor specified in R02 of GE GEnx-1B SB 73-0097 and GEnx-2B SB 73-0090, is not mandated by this AD. The FAA did not change this AD as a result of this comment.

Request to Change Compliance to Allow Dispatch per MMEL

Cathay Pacific commented that Figure 2 to paragraph (g)(2) of the NPRM should specify that dispatch is allowed per the MMEL or dispatch deviation guide (DDG).

The FAA disagrees. After this AD is effective, if any of the fault combinations defined in Figure 2 to paragraph (g)(2) of this AD are present, then dispatch is prohibited, notwithstanding the provisions of the MEL and the DDG. The FAA did not change this AD as a result of this comment.

Request to Revise or Remove Installation Prohibition

Cathay Pacific, GE, and Jetstar suggested revision or removal of paragraph (i), Installation Prohibition, of the NPRM that prohibits installation onto any engine an EEC with an MCB that was subject to more than three replacements of the EEC MN4 microprocessor. GE suggested removing the Installation Prohibition altogether. Jetstar questioned the need to include the Installation Prohibition in paragraph (h), Definition, which defines an approved overhaul procedure. Cathay Pacific suggested revising this paragraph to "do not install an EEC without compliance of the GE SB 73-0097 / SB 73-0090." Jetstar stated that the EEC MN4 microprocessor replacement is managed by the original equipment manufacturer's (OEM) internal maintenance procedures, and operators do not have visibility into the number of replacements that have been performed.

As stated by the commenters, the EEC MN4 microprocessor replacement is managed by the OEM's internal maintenance procedures and, therefore, not necessary in this AD. The FAA has removed the Installation Prohibition from this AD.

Request to Revise Compliance Time

GE recommended that the FAA revise the compliance time in paragraph (g) of the NPRM to account for situations in which cycles accumulated on the EEC MN4 microprocessor cannot be determined through operator maintenance logs or FADEC International shop visit reports. GE proposed that, for these situations, the compliance time allow for replacing the EEC MN4 microprocessor after 12 years since EEC entry into service (EIS) for GEnx-1B model turbofan engines and 14 years since EEC EIS for GEnx-2B model turbofan engines.

The FAA agrees. The commenter's recommended replacement time of 12 years and 14 years since EEC EIS for GEnx-1B and GEnx-2B model turbofan engines, respectively, is based on the average yearly utilization of those engines with an added margin to account for higher utilization engines. The FAA revised paragraph (g)(3) of this AD to require replacement of the EEC MN4 microprocessor at the compliance times noted by GE when cycles accumulated on the EEC MN4 microprocessor cannot be determined. This change to this AD imposes no additional burden on operators.

Request to Update Service Information Revision

GE recommended that the FAA contact GE before publication of this final rule to update the service bulletin references. GE commented that, at the time of its comment, the latest issued service bulletins are GEnx-1B SB 73-0097 R02, dated May 17, 2021, and GEnx-2B SB 73-0090 R02, dated May 20, 2021.

The FAA has updated this AD to reference GEnx-1B SB 73-0097 R02, dated May 17, 2021, and GEnx-2B SB 73-0090 R03, dated August 18, 2021. This change does not affect the instructions for replacing the EEC MN4 microprocessor and places no additional burden on operators.

Request to Clarify Dispatch Restrictions

Boeing requested that the FAA update Figure 1 to paragraph (g)(1) of the NPRM to indicate "Prior to each flight with EICAS Message ENG EEC C1 X, check for the fault combinations in the table." Boeing also requested that the FAA update Figure 2 to paragraph (g)(2) of the NPRM to indicate "Prior to each flight with EICAS Message ENG X EEC C1, check for the fault combinations in the table." Boeing noted that

dispatch is allowed with the ENG EEC C1 L(R) status message for the time specified in the MMEL, which may encompass several flights. Boeing noted that new faults could arise during MMEL dispatch. Boeing concluded that the NPRM should clarify that the inspection for the underlying fault messages should be accomplished prior to each flight.

The FAA agrees to clarify the AD requirement for operators to check for fault combinations prior to each flight. The FAA updated Figure 1 to paragraph (g)(1) of this AD by adding "Prior to each flight with engine indicating and crew alerting system (EICAS) Message "ENG EEC C1 X" (where "X" is engine position: "L" or "R"), check for faults." The FAA updated Figure 2 to paragraph (g)(2) of this AD by adding "Prior to each flight with engine indicating and crew alerting system (EICAS) Message "ENG X EEC C1" (where "X" is engine position: "1," "2," "3," or "4"), check for faults."

Request to Add Additional Fault Codes

Boeing requested that the FAA revise Figure 2 to paragraph (g)(2) of the NPRM to add maintenance messages 7X963 (CH A) and 7X964 (CH B). Boeing reasoned that the TLA out of range fault is identified by different fault codes in a new version of the maintenance computer software. Boeing noted that adding the new fault codes would cover the eventual release of the new fault codes.

The FAA agrees. The FAA revised Figure 2 to paragraph (g)(2) of this AD by adding "OR 7X963 (CH-A)" and "OR 7X964 (CH-B)."

Request to Revise Effectivity of EEC Replacement

UAL Engineering requested that the FAA update paragraph (c), Applicability, of the NPRM to reference GE GEnx-1B SB 73-0097 for EEC part number (P/N) applicability.

The FAA disagrees. All EEC P/Ns currently installed on affected GEnx-1B and GEnx-2B model turbofan engines are susceptible to the unsafe condition addressed by this AD. The FAA did not change this AD as a result of this comment.

Request Allowance to Accomplish a Manual Review for Maintenance Messages

UPS requested the FAA revise the NPRM to allow for the accomplishment of a manual review to inspect for any correlated maintenance messages on the flight leg in which the C1 fault was present in the event that an EEC C1 EICAS message is displayed

without a correlated fault in the central maintenance computer (CMC). UPS reasoned that both Boeing and GE have confirmed that six maintenance messages (7x310, 7x311, 7x312, 7x069, 7x071, and 7x073) correlate to C1 faults for which the cockpit CMC screen will not show a correlation.

The FAA agrees that six maintenance messages correlate to EICAS Message "ENG EEC C1," but do not show a correlation to "ENG EEC C1" in the cockpit CMC screen. The CMC maintenance software lacks the capability to correlate those six maintenance messages, and currently the only available method for correlating those six maintenance messages is by performing a manual review. The FAA disagrees, however, with changing this AD, as the method for establishing correlation is not prescribed in this AD.

Support for the AD

ALPA, Jetstar, UAL Engineering, and American expressed support for the proposed rule with the comments previously discussed.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed GE GEnx-1B Service Bulletin (SB) 73-0097 R02, dated May 17, 2021, R01, dated January 29, 2021, and R00, dated December 17, 2020; and GE GEnx-2B SB 73-0090 R03, dated August 18, 2021, R02, dated May 20, 2021, R01, dated January 28, 2021, and R00, dated December 17, 2020. This service information specifies procedures for replacing the EEC MN4 microprocessor on GEnx-1B and GEnx-2B model turbofan engines, as applicable. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Interim Action

The FAA considers this AD to be an interim action. If final action is later identified, the FAA might consider additional rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 308 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Revise operator's FAA-approved MEL	1 work-hour x $85 per hour = $85	$0	$85	$26,180
Replace EEC MN4 microprocessor	1 work-hour x $85 per hour = $85	$25,200	$25,285	$7,787,780

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-21-05 General Electric Company: Amendment 39-21765; Docket No. FAA-2021-0273; Project Identifier AD-2021-00050-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to General Electric Company (GE) GEnx-1B64, GEnx-1B64/P1, GEnx-1B64/P2, GEnx-1B67, GEnx-1B67/P1, GEnx-1B67/P2, GEnx-1B70, GEnx-1B70/75/P1, GEnx-1B70/75/P2, GEnx-1B70/P1, GEnx-1B70/P2, GEnx-1B70C/P1, GEnx-1B70C/P2, GEnx-1B74/75/P1, GEnx-1B74/75/P2, GEnx-1B76/P2, GEnx-1B76A/P2, GEnx-2B67, GEnx-2B67/P, and GEnx-2B67B model turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7600, Engine Controls.

(e) Unsafe Condition

This AD was prompted by an in-service occurrence of loss of engine thrust control resulting in uncommanded high thrust. The FAA is issuing this AD to prevent dispatch of the airplane when certain conditions caused by degradation of the MN4 microprocessor in the electronic engine control (EEC) are present. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For all affected GEnx-1B model turbofan engines, within 120 days of the effective date of this AD, revise the operator's existing FAA-approved minimum equipment list (MEL) by incorporating into the MEL the dispatch restriction specified in Figure 1 to paragraph (g)(1) of this AD, as a required operation or maintenance procedure.

Note 1 to paragraph (g)(1): Specific alternative MEL wording to accomplish the actions specified in Figure 1 can be approved by the operator's principal operations or maintenance inspector.

Figure 1 to Paragraph (g)(1) – Dispatch Restriction for Engine Indicating and Crew Alerting System (EICAS) MESSAGE ENG EEC C1 for GEnx-1B

Prior to each flight with engine indicating and crew alerting system (EICAS) Message "ENG EEC C1 X" (where "X" is engine position: "L" or "R"), check for faults. Dispatch of an airplane is prohibited if the EICAS displays the status message "ENG EEC C1 X" and any of the following conditions exist:

i. None of the maintenance messages in the Central Maintenance Computing Function (CMCF) correlate with "ENG EEC C1 X" status message; or

ii. The following maintenance message fault codes combination exists in the CMCF for either channel A or B (where "X" is engine position: "1" or "2").

Fault Combination Description	**Corresponding Fault Codes Combination**
{TLA out of range fault} **AND** {FMV/FSV disagree fault **OR** FMV/FSV out of range fault (on the same channel as TLA out of range fault)}	{76-1953X (CH-A)} **AND** {73-3204X **OR** 73-3121X **OR** 73-1205X **OR** 73-1122X}
	{76-2953X (CH-B)} **AND** {73-3204X **OR** 73-3121X **OR** 73-2205X **OR** 73-2122X}

(2) For all affected GEnx-2B model turbofan engines, within 120 days of the effective date of this AD, revise the operator's existing FAA-approved MEL by incorporating into the MEL the dispatch restriction specified in Figure 2 to paragraph (g)(2) of this AD, as a required operation or maintenance procedure.

Note 2 to paragraph (g)(2): Specific alternative MEL wording to accomplish the actions specified in Figure 2 can be approved by the operator's principal operations or maintenance inspector.

Figure 2 to Paragraph (g)(2) – Dispatch Restriction for EICAS MESSAGE ENG EEC C1 for GEnx-2B

Prior to each flight with engine indicating and crew alerting system (EICAS) Message "ENG X EEC C1" (where "X" is engine position: "1," "2," "3," or "4"), check for faults. Dispatch of an airplane is prohibited if the EICAS displays the status message "ENG X EEC C1" and any of the following conditions exist:

i. None of the maintenance messages in the Central Maintenance Computer (CMC) correlate with "ENG X EEC C1" status message; or

ii. The following maintenance message fault codes combination exists in the CMC for either channel A or B (where "X" is engine position: "1," "2," "3," or "4").

Fault Combination Description	Corresponding Fault Codes Combination
{TLA out of range fault} **AND** {FMV/FSV disagree fault **OR** FMV/FSV out of range fault (on the same channel as TLA out of range fault)}	{78X13 (CH-A) **OR** 7X963 (CH-A)} **AND** {7X132 **OR** 7X144 **OR** 7X130 **OR** 7X145}
	{78X14 (CH-B) **OR** 7X964 (CH-B)} **AND** {7X132 **OR** 7X144 **OR** 7X133 **OR** 7X146}

(3) For all affected engines, before the EEC reaches 11,000 cycles since new, replace the EEC MN4 microprocessor using an approved overhaul procedure.

(i) If the number of accumulated cycles on the EEC MN4 microprocessor cannot be determined through operator maintenance logs or FADEC International shop visit reports, before the EEC exceeds 12 years since entry into service (EIS) for affected GEnx-1B model turbofan engines or 14 years since EIS for affected GEnx-2B model turbofan engines, replace the EEC MN4 microprocessor using an approved overhaul procedure.

(ii) [Reserved]

(4) Thereafter, replace the EEC MN4 microprocessor before accumulating 11,000 cycles since the last replacement.

(h) Definition

For the purposes of this AD, an "approved overhaul procedure" is one of the following:

(1) Replacement of the EEC MN4 microprocessor using FADEC International-approved maintenance procedures; or

(2) Replacement of the EEC MN4 microprocessor using the Accomplishment Instructions, paragraph 3., as applicable, of:

(i) GE GEnx-1B Service Bulletin (SB) 73-0097 R00, dated December 17, 2020; R01, dated January 29, 2021; or R02, dated May 17, 2021; or

(ii) GE GEnx-2B SB 73-0090 R00, dated December 17, 2020; R01, dated January 28, 2021; R02, dated May 20, 2021; or R03, dated August 18, 2021.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

For more information about this AD, contact Mehdi Lamnyi, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7743; fax: (781) 238-7199; email: Mehdi.Lamnyi@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) GE GEnx-1B Service Bulletin (SB) 73-0097 R02, dated May 17, 2021.

(ii) GE GEnx-1B SB 73-0097 R01, dated January 29, 2021.

(iii) GE GEnx-1B SB 73-0097 R00, dated December 17, 2020.

(iv) GE GEnx-2B SB 73-0090 R03, dated August 18, 2021.

(v) GE GEnx-2B SB 73-0090 R02, dated May 20, 2021.

(vi) GE GEnx-2B SB 73-0090 R01, dated January 28, 2021.

(vii) GE GEnx-2B SB 73-0090 R00, dated December 17, 2020.

(3) For GE service information identified in this AD, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ae.ge.com; website: www.ge.com.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on October 5, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-25491 Filed: 11/22/2021 8:45 am; Publication Date: 11/23/2021]